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AUTHOR Mark, Sandra Fay
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ABSTRACT

The self-perceptions and attributions for success among 561 college administrators were studied. Questionnaires were completed by presidents (27 percent), deans (27 percent), directors and coordinators (33 percent), and nonadministrative faculty (13 percent). Self-perceptions were measured by adjectives that were subsequently categorized as masculine, feminine, and neutral. Results indicated that for sex, females perceived themselves as more masculine, more feminine, and more neutral than did males. The mean score for the masculine self-descriptors was the lowest of the three groups of adjectives, and females outscored males in reporting that they saw themselves with more masculine behavior in their jobs. Respondents were more likely to perceive themselves as characteristically "feminine" in leadership behaviors if they were female, married, and nonadministrators. Presidents and married subjects perceived themselves as more masculine than other administrative levels and marital statuses. Attributions for success, measured by weights given hard work, ability, luck, and ease of task, revealed significant differences on the latter two attributions only. (Author/SW)

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LEADERSHIP IN HIGHER EDUCATION: SUCCESS ATTRIBUTIONS
AND SELF-PERCEPTIONS OF COLLEGE ADMINISTRATORS

by

Dr. Sandra Fay Mark
Assistant Dean of Instruction
Corning Community College
Corning, New York 14830

Paper presented at the Annual Meeting of the
Association for the Study of Higher Education
Chicago, Illinois
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Association for the Study of Higher Education

The George Washington University/One Dupont Circle, Suite 630/Washington, D.C. 20036
(202) 298-2597

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Annual Meeting—March 12-14, 1984—Conrad Hilton
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"LEADERSHIP IN HIGHER EDUCATION: SUCCESS ATTRIBUTIONS AND SELF-
PERCEPTIONS OF COLLEGE ADMINISTRATORS"

ABSTRACT

A survey research questionnaire investigated the self-perceptions and attributions for success among 561 college administrators, including presidents (27%), deans (27%), directors and coordinators (33%) and non-administrative faculty (13%). Self-perceptions were measured by adjectives which were subsequently categorized as masculine, feminine and neutral. Results indicated that for sex, Females perceived themselves as more masculine, more feminine and more neutral than did Males. Presidents and Married subjects perceived themselves as more masculine than other administrative levels and marital statuses. Attributions for Success, measured by weights given hard work, ability, luck, and ease of task, revealed significant differences on the latter two attributions only.

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Objectives

Studies of leaders in business and higher education indicate that there are similar and different self-perceptions and attributions for success made by females compared to males, all of whom have high career commitments and aspirations. The purpose of the present study was to investigate the following issues with regard to women and men in higher education: (1) the manner in which administrators perceived themselves in their present jobs with regard to sex-typed characteristics, and (2) the kind of attributions made by administrators to explain their success in their jobs.

Theoretical Framework

Leadership studies have typically used subjects who were inexperienced and unrepresentative for the leadership dimension. However, Kanter (1977) and Hennig and Jardim (1977) used a variety of comparisons between men and women, as well as among different levels of women, to study leadership in business settings. Studies comparable to these have seldom been conducted in the college and university setting. Further, although a majority of female college presidents are Roman Catholic nuns (between 50%-75%), the dimension of marital status called "Monastic" has seldom been studied in the secular literature (Mark, 1982). This study of leadership in higher education includes women and men who are at differing levels of administration and who are of differing levels of marital status, including monastics.

Contrary to the findings of Dweck (1976), no sex differences were found in the present study for hard work, ability and luck attributions. Deaux (1976) suggests that, "... sex is merely one example of a more pervasive characteristic of the attribution

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Perspectives and Theoretical Framework

Leadership studies have typically used subjects who were inexperienced and unrepresentative for the leadership dimension. However, Kanter (1977) and Hennig and Jardim (1977) used a variety of comparisons between men and women, as well as among different levels of women, to study leadership in business settings. Studies comparable to these have yet to be conducted in the college and university setting, leaving a gap in knowledge about the leadership dimension in higher education. Further, although a majority of female college presidents are Roman Catholic nuns (between 50% and 75%), the dimension of marital status called "Monastic" has seldom been studied in the secular literature. This study of leadership in higher education includes women and men who are at different levels of administration and who are of differing levels of marital status, including monastics (Mark, 1982).

Contrary to the findings of Dweck (1976), no sex differences were found in the present study for hard work, ability and luck attributions. Deaux (1976) suggests that, "...sex is merely one example of a more pervasive characteristic of the attribution

process, whereby stereotypes and expectations influence the attribution which is selected." This position is supported in the present study in that differences were found for administrative level and marital status for luck and for sex and marital status for ease of task attributions.

Method

Self-Descriptors:

A survey research questionnaire was used via a mail campaign to 900 higher education administrators. The "Higher Education Career Questionnaire" was an eight-page survey covering a variety of issues including specific issues having to do with self-perceptions and attributions for success on the job. With regard to self-perceptions, subjects were asked to indicate the extent to which each of fifteen adjectives best described them in their present job as they saw themselves. In a previous study, these fifteen adjectives had been selected as having the highest agreement among raters for being sex-typed (masculine or feminine) or neutral. These fifteen adjectives were: AUTHORITATIVE, DOMINANT, UNEMOTIONAL, INFLUENTIAL and POWERFUL (masculine self-descriptors); SENSITIVE, OPEN, COMPASSIONATE, CONCERNED, SINCERE and TALKATIVE (feminine self-descriptors); and INTELLIGENT, PLEASANT, FRIENDLY and JUST (neutral self-descriptors). These fifteen self-descriptors assessed subjects' self-perceptions of the sex-appropriateness of their own behavior in their jobs. Subjects reported the extent to which each adjective "described you in your present job as you see yourself." All of the self-descriptors had the same response-format, a seven-point, Likert-type scale ranging from "1" (Not at all like me) to "7" (Very much like me). Figure 1 indicates the specific page of the "Higher Education Career Questionnaire" dealing with these questions. The response criterion for each of these three groups of self-descriptors was as follows: subjects must have responded to at least four of the ~~five~~ "masculine" adjectives (80%), to at least five of the six "feminine" adjectives (83%), and to at least three of the four "neutral" adjectives (75%). Mean scores

-3-
FIGURE I

9. Would you work if you didn't have to for economic reasons? Yes, No. If yes, why? _____
10. Until what age do you see yourself working? _____
11. Why do you work? Please rank order the reasons listed below, using "1" for the most important reason, and "5" for the least important reason:
- _____ Out of necessity as I am my own sole support.
 - _____ For economic reasons to supplement my partner's income.
 - _____ For emotional and psychological reasons (I don't need the money - I enjoy it).
 - _____ For intellectual and creative reasons.
 - _____ For personal and social reasons (to keep busy, keep from getting bored, to meet people).
 - _____ Other (explain) _____
12. Does your present job involve any social responsibilities such as entertaining?
Yes, No. If yes, how frequently? Very Often, Sometimes, Seldom.
 If yes, what type of responsibilities do you personally perform?
 (Check all that apply):
 Organizing and planning Buying items Serving
 Inviting guests Cooking Clean-up
 If not you, then who else completes these tasks? Partner/Spouse, Sec'y/Ass't.
13. Please indicate how successful you consider yourself to be in your career by circling the appropriate number:
- | | | | | | | |
|-----------------------|---|---|-------------------|---|---|---|
| Not at all successful | | | Highly successful | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
14. Reasons for degree of success. Please assign percentages to each of the following reasons, according to how much each reason contributes to your success in your career. The total percentages should add up to 100%:
- _____ % Hard work and putting in a great deal of effort.
 - _____ % A great deal of luck, timing, knowing the right people.
 - _____ % Intelligence and natural ability.
 - _____ % Ease of the jobs I've had.
 - 100% Total
15. Using the scale below, select the number for each word listed below that best describes you in your present job as you see yourself. Write a number for each word in the space in front of each word:
- | | | | | | | |
|--------------------|---|---|-------------------|---|---|---|
| Not at all like me | | | Very much like me | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
- | | | |
|---------------------|---------------------|-----------------|
| _____ sensitive | _____ pleasant | _____ concerned |
| _____ authoritative | _____ compassionate | _____ powerful |
| _____ intelligent | _____ unemotional | _____ sincere |
| _____ open | _____ friendly | _____ just |
| _____ dominant | _____ influential | _____ talkative |
16. How many professional articles have you had published in the past five years?
 (check one): None 1-2, 3-5 6-10, 11-15 over 15.
17. How many professional books have you had published in the past five years?
 (check one): None one, two three, four five or more.
18. How many professional presentations (e.g., papers, speeches, workshops) have you given in the past five years? (check one): None 1-5, 6-10 11-20, 21-40 41-60, 61-100 over 100.

were computed for each of these three groups of self-descriptors.

Success Attributions:

Subjects were asked to assign percentages to each of four reasons (for a total of 100%) according to how much each reason contributed to their success in their job. These reasons were the variables "Attributions for Success" and included: HARD WORK (putting in a great deal of effort), ABILITY (intelligence and natural skill), LUCK (timing, knowing the right people), and EASE OF THE TASK (degree of task difficulty). Subjects' responses to each of these four success-attributions involved their assigning a percent for each attribution with the total adding up to 100%. A mean score for each success-attribution was calculated which represented the mean percent subjects' assigned it as a reason for their success in their jobs. In addition, a "Composite Index of Internality" score was calculated (Rosenfield and Stephan, 1978). The percent each subject assigned HARD WORK and ABILITY attributions were added. The percent each subject assigned LUCK and EASE OF TASK were added, then subtracted from the sum of percents for HARD WORK and ABILITY. The resulting percent is a measure of how much of subjects' success in their jobs is attributed to "Internal" rather than "External" reasons.

Independent variables were sex (female, male), administrative level (chiefs, deans, directors/coordinators, and non-administrative faculty), and marital status (single, married, and monastic). The two dependent variables described in this paper were: self-descriptors (masculine, feminine, neutral) and success attributions (hard work, ability, luck, ease of task).

Data Source

Of the 900 individuals contacted, 561 responded for a 62.33% response rate. The 900 individuals were selected from a stratified random national sample of higher education administrators including chiefs (presidents and chancellors),

deans (all deanship levels), other administrators (directors, coordinators, etc.), as well as a comparison group of non-administrators (faculty). All of the women college presidents in the United States were contacted. Of the 561 subjects responding, 55% were female and 45% were male; 27% were chiefs, 27% were deans, 33% were other administrators, and 13% were non-administrators. Of additional interest is the fact that 40% of the sample that responded were nuns and priests, who were included because of the overwhelming number of women college presidents who were reported to be Roman Catholic nuns. Few studies have attempted to survey this population of religious leaders, leaving us with relatively little information about this significant portion of academic female leaders.

Results

Separate 2 x 4 x 3 (sex, administrative level, marital status) analyses of variance were conducted using the BMDP2V analysis of variance program (Jennrich and Sampson, 1979). Each of the dependent measures were analyzed using this design. All significant statements are based upon post-hoc analyses using Tukey tests for unequal N's using all possible pairs of meaningful means (see Reference Note 1, Winer, 1971).

The specific questions which this research study was designed to answer were whether or not women and men at differing levels of higher education administration and of differing marital statuses differed in the way they described themselves and in the reasons they gave for their success in their jobs.

Personal Characteristics:

In addition to data on their sex and administrative level, subjects indicated their marital status, age, race/ethnicity, religion and educational level reached. The marital statuses of subjects included 222 Monastics (39.6%), 196 Marrieds (34.9%), 105 Singles (18.7%), and 38 subjects (6.8%) whose marital status was not indicated.

Subjects' mean Age was 49.76 years (standard deviation -9.96, N = 510). Females in this sample were slightly, but not significantly, older (Females' Age = 50.08 years) than Males (Males' Age = 49.45 years). Chiefs were the oldest administrators (52.9 years), Non-Administrators were next (50.64 years), followed by Deans (48.72 years), and Other-Administrators (46.8 years) who were the youngest group, revealing a disordinal age relationship for Administrative Level.

Overwhelmingly, the majority of 535 subjects responding to this question (96%) indicated they were Caucasian, while 10 subjects (2%) were Black. Five Asian-Americans accounted for slightly more than 1%, three Native-Americans accounted for slightly under 1%, as did the two Hispanic-Americans. One subject indicated "Other" race/ethnicity, and five subjects did not respond.

A majority of 304 subjects (55%) were Catholic, 161 subjects (29%) were Protestant, 29 subjects (5%) were Jewish, 43 subjects (8%) indicated No Religion, 17 subjects (3% indicated Other Religion, and 7 subjects did not respond.

Most subjects had earned a Bachelor's degree (N = 505) and Master's degree (N = 481). A small number (N = 54) were ABD (had completed all-but-the-dissertation), and almost half (N = 278) had earned the Doctorate.

Self-Descriptors:

This variable attempted to measure subjects' self-perceptions of the sex-appropriateness of their own behavior in their jobs. This variable contained fifteen adjectives grouped into three "Self-Descriptor" scales: Masculine, Feminine, and Neutral. Each of the subjects' "Self-Descriptor" scores was subjected to a 2 x 4 x 3 analysis of variance and post-hoc comparisons, and are reported separately.

(1) Masculine Self-Descriptors - Results indicated that significant main effects were found for Sex ($F = 6.37$; $df = 1, 442$; $p = .0119$), for Administrative Level ($F = 6.593$; $df = 3, 442$; $p = .0002$), and for Marital Status ($F = 5.834$; $df = 2, 442$; $p = .0031$). Two significant interactions were

also found: (1) between Sex and Marital Status ($F = 3.158$; $df = 2, 442$; $p = .0434$) and (2) between Administrative Level and Marital Status ($F = 2.626$; $df = 6, 442$; $p = .0163$). It is interesting to note that the grand mean for Masculine Self-Descriptors ($\bar{X}_G = 3.815$) was lower than that of Feminine Self-Descriptors ($\bar{X}_G = 5.55$) or than Neutral Self-Descriptors ($\bar{X}_G = 5.788$).

The main effect for Sex indicated that Females' score ($\bar{X} = 3.96$) was higher than Males' score ($\bar{X} = 3.67$), a difference which was significant ($p = .0119$). The main effect for Administrative Level indicated that chiefs had the highest score ($\bar{X} = 4.09$), followed by deans ($\bar{X} = 4.04$), other-administrators ($\bar{X} = 3.66$) and non-administrators ($\bar{X} = 3.47$). The score for chiefs was significantly higher than that for other-administrators ($p = .01$), and non-administrators ($p = .01$). The score for deans was significantly higher than that for other-administrators ($p = .05$) and non-administrators ($p = .01$). The main effect for marital status indicated that marrieds had the highest score ($\bar{X} = 4.06$), followed by monastics ($\bar{X} = 3.70$) and singles ($\bar{X} = 3.69$). The score for marrieds was significantly higher than that for both monastics ($p = .01$) and singles ($p = .01$). Table 1 and Figures 2, 3, and 4 summarize the main effects.

The significant Sex by Marital Status interaction revealed several within-sex and one between-sex differences. Within-sex differences included: (1) Among Females, Married Females had the highest score ($\bar{X} = 4.14$), followed by Single Females ($\bar{X} = 4.05$) and Monastic Females ($\bar{X} = 3.69$). The scores of both the Married Females and Single Females were significantly higher than that of the Monastic Females ($p = .01$, $p = .05$ respectively); (2) Among Males, Married Males also had the highest score ($\bar{X} = 3.97$), followed by Monastic Males ($\bar{X} = 3.72$) and Single Males ($\bar{X} = 3.32$). The score for Married Males was significantly higher than that for Single Males ($p = .01$). The between-sex difference occurred in the Single group. The score of Female Singles ($\bar{X} = 4.05$) was significantly higher than that of Male Singles ($\bar{X} = 3.32$) at the $p = .01$ level. Table 2 and Figure 5 summarize these results.

TABLE 1
"MASCULINE SELF-DESCRIPTORS"
MEAN SCALE SCORES FOR MAIN EFFECTS

MAIN EFFECT FOR SEX		
	<u>FEMALES</u>	<u>MALES</u>
MEAN SCALE SCORE:	3.96	3.67
STATISTICS:	F = 6.37 ; DF = 1,442 ; P = .0119	

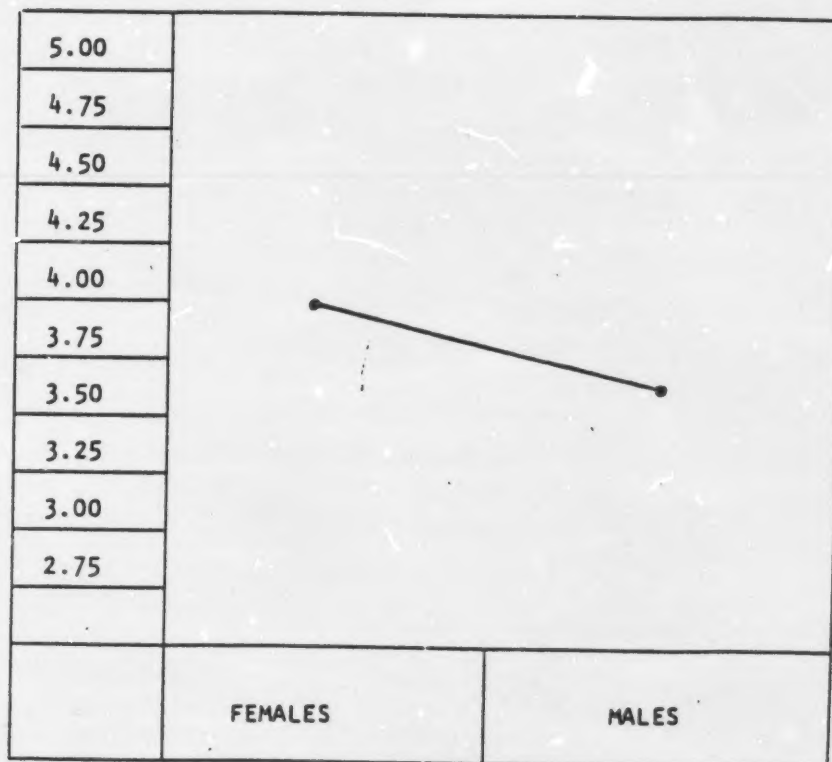
MAIN EFFECT FOR ADMINISTRATIVE LEVEL				
	<u>CHIEFS</u>	<u>DEANS</u>	<u>OTHER- ADMINISTRATORS</u>	<u>NON- ADMINISTRATORS</u>
MEAN SCALE SCORE:	4.09	4.04	3.66	3.47
STATISTICS:	F = 6.59 ; DF = 3,442 ; P = .0002			

MAIN EFFECT FOR MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
MEAN SCALE SCORE:	3.70	4.06	3.69
STATISTICS:	F = 5.834 ; DF = 2,442 ; p = .0031		

FIGURE 2

"MASCULINE SELF-DESCRIPTORS"

MAIN EFFECT FOR SEX



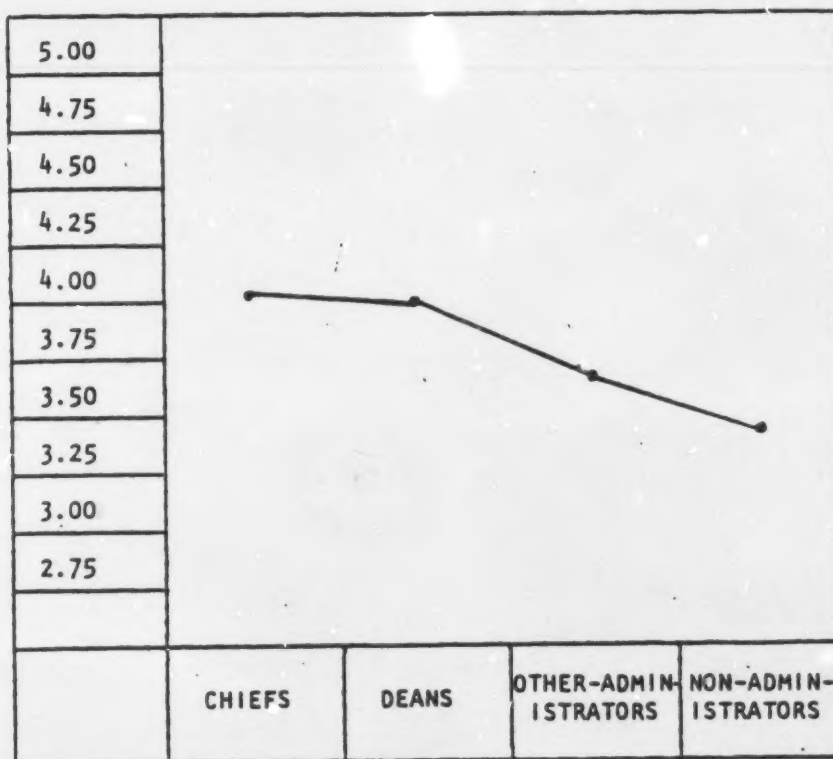
STATISTICAL RESULTS:

$F = 6.37$; $df = 1, 442$; $p = .0119$

FIGURE 3

"MASCULINE SELF-DESCRIPTORS"

MAIN EFFECT FOR ADMINISTRATIVE LEVEL



STATISTICAL RESULTS:

$F = 6.59$; $df = 3, 442$; $p = .0002$

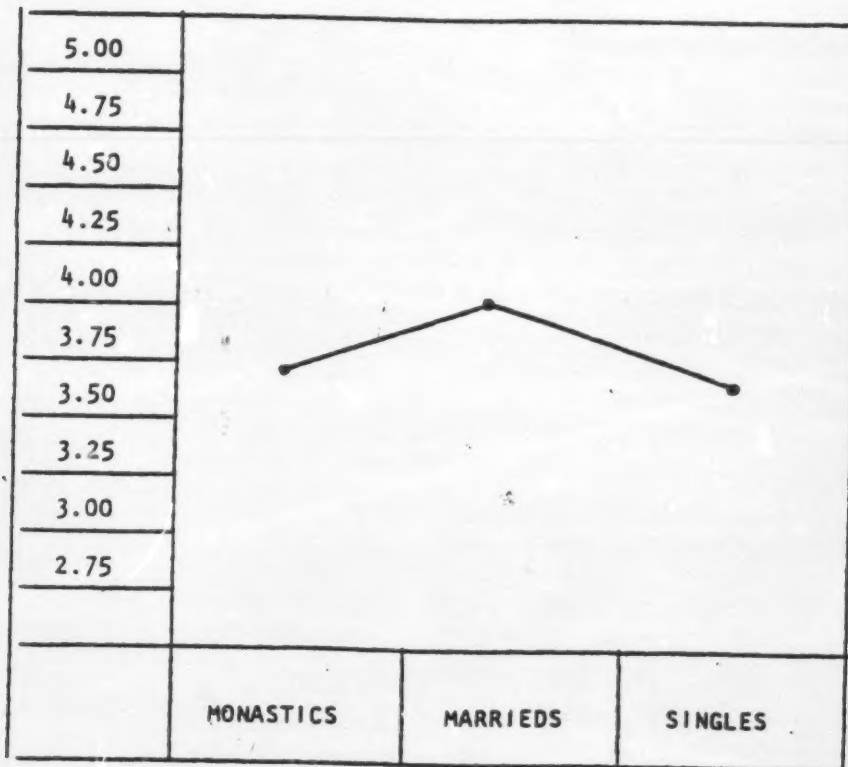
Tukey post hoc comparisons:

- ($p = .01$) Chiefs are significantly higher than Other-Admins.
- ($p = .01$) Chiefs are significantly higher than Non-Admins.
- ($p = .05$) Deans are significantly higher than Other-Admins.
- ($p = .01$) Deans are significantly higher than Non-Admins.

FIGURE 4

"MASCULINE SELF-DESCRIPTORS"

MAIN EFFECT FOR MARITAL STATUS



STATISTICAL RESULTS:

$F = 5.834$; $df = 2, 442$; $p = .0031$

Tukey post hoc comparisons:

- ($p=.01$) Marrieds are significantly higher than Monastics.
- ($p=.01$) Marrieds are significantly higher than Singles.

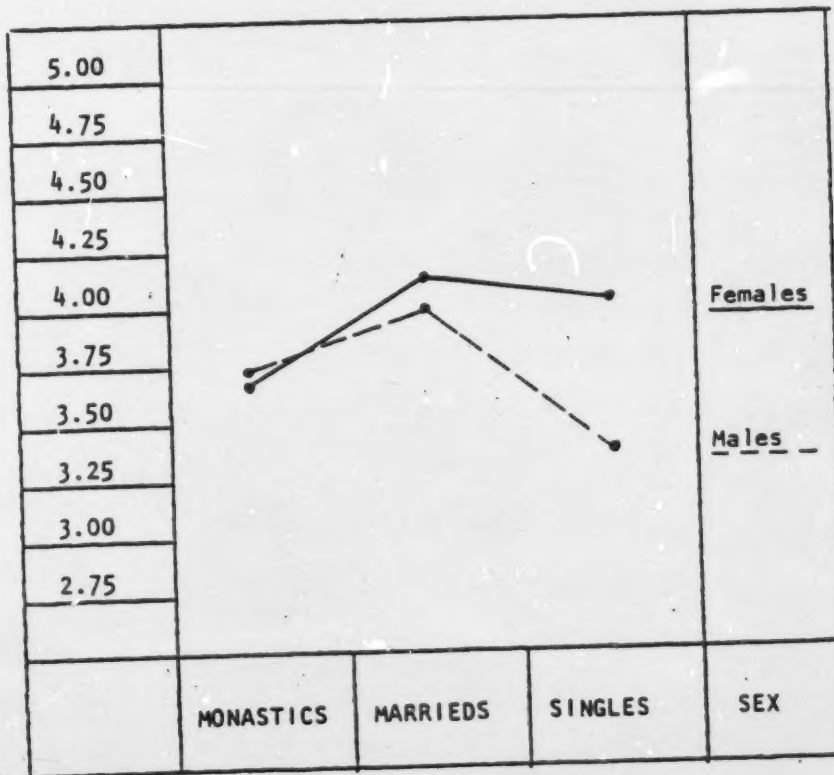
TABLE 2
"MASCULINE SELF-DESCRIPTORS"
SEX BY MARITAL STATUS INTERACTION
MEAN SCALE SCORES

INTERACTION: SEX BY MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
FEMALES:	3.69	4.14	4.05
MALES:	3.72	3.97	3.32
STATISTICS:	F = 3.158 ; DF = 2,442 ; p = .0434		

FIGURE 5

"MASCULINE SELF-DESCRIPTORS"

SEX BY MARITAL STATUS INTERACTION



STATISTICAL RESULTS:

$F = 3.158$; $df = 2, 442$; $p = .0434$

Tukey post hoc comparisons:

- ($p=.01$) Female Singles are significantly higher than Male Singles.
- ($p=.05$) Female Singles are significantly higher than Female Monastics.
- ($p=.01$) Female Marrieds are significantly higher than Female Monastics.
- ($p=.01$) Male Marrieds are significantly higher than Male Singles.

The significant interaction between Administrative Level and Marital Status revealed three significant differences: (1) Among Deans, married deans had the highest score ($\bar{X} = 4.31$), followed by single deans ($\bar{X} = 4.27$) and monastic deans ($\bar{X} = 3.56$). The scores of both married and single deans were significantly higher than that of monastic deans ($p = .01$); (2) Among Non-Administrators, monastic non-administrators had the highest score ($\bar{X} = 3.80$), followed by married non-administrators ($\bar{X} = 3.77$) and single non-administrators ($\bar{X} = 2.83$). The scores of both monastic and married non-administrators were significantly higher than that of single non-administrators ($p = .01$, $p = .05$ respectively); (3) Among the group of single subjects, single deans had the highest score ($\bar{X} = 4.27$), followed by single chiefs ($\bar{X} = 4.15$), other-administrators ($\bar{X} = 3.49$), and non-administrators ($\bar{X} = 2.83$). The scores of the single chiefs and single deans were both significantly higher than that of single non-administrators ($p = .01$). Table 3 and Figure 6 summarize these results.

(2) Feminine Self-Descriptors - Results indicated that a significant main effect for Sex was found ($F = 4.567$; $df = 1, 442$; $p = .0331$), as well as a significant interaction between Administrative Level and Marital Status ($F = 2.236$; $df = 6, 442$; $p = .0388$). It is interesting to note that the grand mean for Feminine Self-Descriptors ($\bar{X}_G = 5.55$) was in the middle, above that for Masculine Self-Descriptors ($\bar{X}_G = 3.815$) but below that for Neutral Self-Descriptors ($\bar{X}_G = 5.788$).

The main effect for Sex revealed that the score for Females ($\bar{X} = 5.63$) was significantly higher than that for Males ($\bar{X} = 5.469$), at the $p = .0331$ level. Table 4 and Figure 7 summarize these results.

The interaction between Administrative Level and Marital Status revealed two significant differences: (1) Within the non-administrative group, married non-administrators scored highest ($\bar{X} = 5.89$), followed by monastic non-administrators ($\bar{X} = 5.42$) and single non-administrators ($\bar{X} = 5.37$). The score for married non-administrators was significantly higher than that for single non-administrators ($p = .05$); (2) Within the

TABLE 3

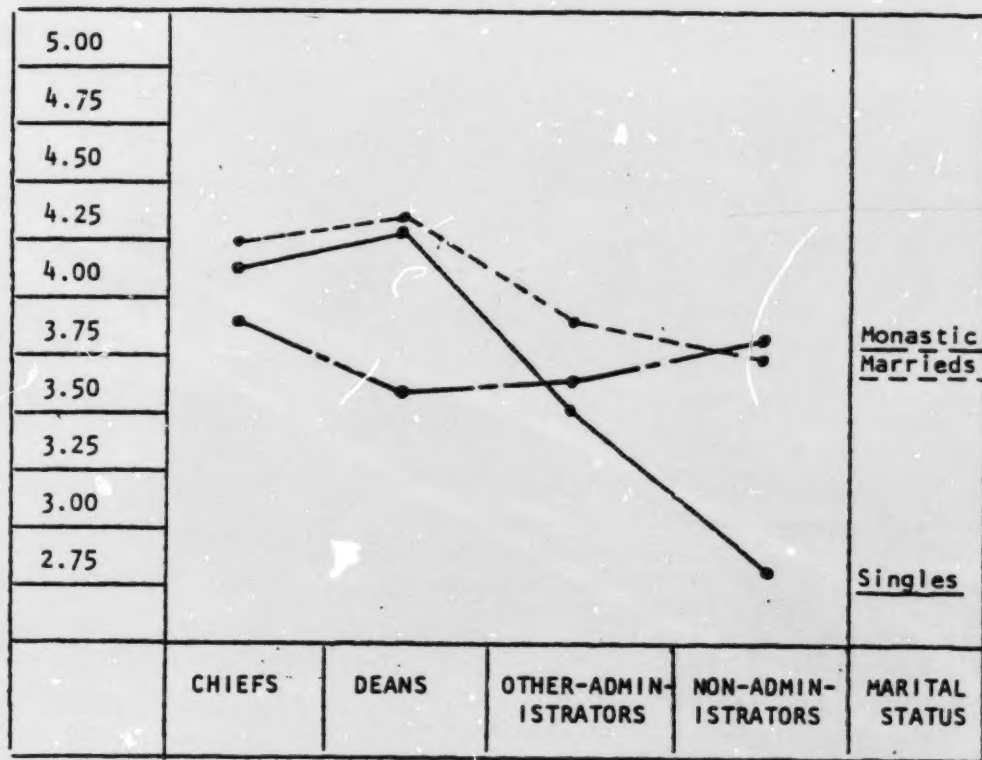
"MASCULINE SELF-DESCRIPTORS"
ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION
MEAN SCALE SCORES

INTERACTION: ADMINISTRATIVE LEVEL BY MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
CHIEFS:	3.86	4.25	4.15
DEANS:	3.56	4.31	4.27
OTHER-ADMINISTRATORS:	3.60	3.89	3.49
NON-ADMINISTRATORS:	3.80	3.77	2.83
STATISTICS:	F = 2.626 ; DF = 6,442 ; p = .0163		

FIGURE 6

"MASCULINE SELF-DESCRIPTORS"

ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION



STATISTICAL RESULTS:

$F = 2.626$; $df = 6, 442$; $p = .0163$

Tukey post hoc comparisons:

- ($p=.01$) Single Deans are significantly higher than Monastic Deans.
- ($p=.01$) Married Deans are significantly higher than Monastic Deans.
- ($p=.01$) Monastic Non-Admins. are significantly higher than Single Non-Admins.
- ($p=.05$) Married Non-Admins. are significantly higher than Single Non-Admins.
- ($p=.01$) Single Chiefs are significantly higher than Single Non-Admins.
- ($p=.01$) Single Deans are significantly higher than Single Non-Admins.

TABLE 4

"FEMININE SELF-DESCRIPTORS"

MAIN EFFECT AND ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION

MEAN SCALE SCORES

MAIN EFFECT FOR SEX		
	<u>FEMALES</u>	<u>MALES</u>
MEAN SCALE SCORE:	5.631	5.469
STATISTICS:	F = 4.567 ; DF = 1,442 ; p = .0331	

TABLE 5

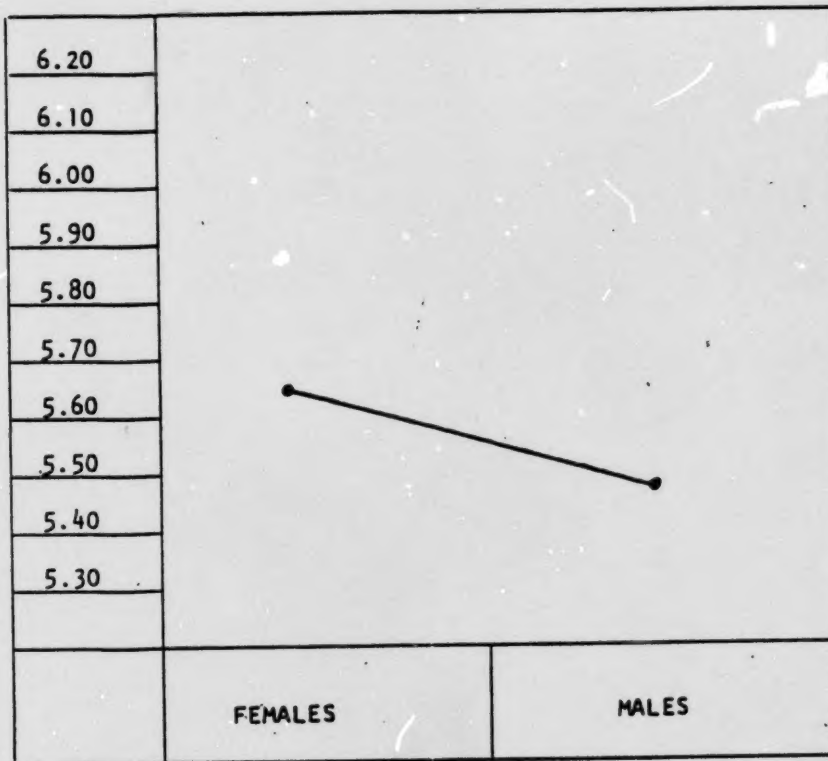
INTERACTION: ADMINISTRATIVE LEVEL BY MARITAL STATUS

	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
CHIEFS:	5.60	5.52	5.63
DEANS:	5.41	5.67	5.69
OTHER-ADMINISTRATORS:	5.57	5.52	5.32
NON-ADMINISTRATORS:	5.42	5.89	5.37
STATISTICS:	F = 2.236 ; DF = 6,442 ; p = .0388		

FIGURE 7

"FEMININE SELF - DESCRIPTORS"

MAIN EFFECT FOR SEX



STATISTICAL RESULTS:

$F = 4.567$; $df = 1, 442$; $p = .0331$

married group of subjects, married non-administrators had the highest score ($\bar{X} = 5.89$), followed by married deans ($\bar{X} = 5.67$), married chiefs ($\bar{X} = 5.52$) and married other-administrators ($\bar{X} = 5.52$). The score for married non-administrators approached a significant difference compared to scores of married chiefs and married other-administrators ($p = .05+$). Table 5 and Figure 8 present these results.

(3) Neutral Self-Descriptors - Results indicated that a significant main effect was found for Sex ($F = 4.037$; $df = 1, 442$; $p = .0451$). It is interesting to note that the grand mean for Neutral Self-Descriptors ($\bar{X}_G = 5.788$) was highest of all three groups of self-descriptors, as measured by a seven-point scale.

The main effect for Sex revealed that the score for Females ($\bar{X} = 5.87$) was higher than that for Males ($\bar{X} = 5.71$), a difference which was significant ($p = .0451$). No other significant differences were found for this scale. Table 6 and Figure 9 present these results.

Success Attributions:

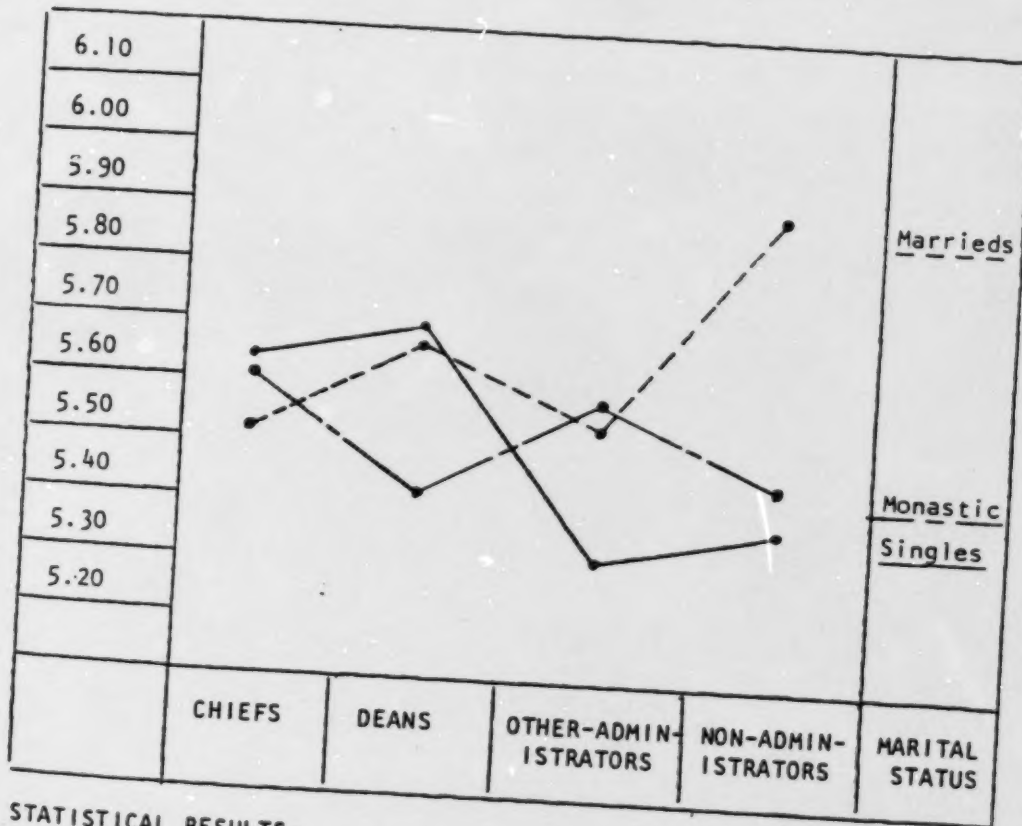
An attempt was made to measure the reasons subjects gave to explain their success in their jobs. Known as attributions, these included: (1) Hard Work, (2) Ability, (3) Luck, and (4) Ease of Task. Subjects' responses to each of these four success attributions were calculated and mean scores derived. These were subjected to separate $2 \times 4 \times 3$ (sex, administrative level, marital status) analyses of variance, which in turn were subjected to post-hoc comparisons (Tukey tests, see Reference Note One). Results for each success attribution are reported separately.

(1) Hard Work - Results indicated that subjects assigned the greatest weight to "Hard Work" ($\bar{X}_G = 47.6\%$) of all four success attributions. However, no significant results or trends were found. It is interesting to note that with regard to Sex, Females in this study attributed more of their success ($\bar{X} = 48.02\%$) to "Hard Work" than Males in this study ($\bar{X} = 47.17\%$). With regard to Administrative Level, chiefs attributed their success most to "Hard Work" ($\bar{X} = 48.54\%$), followed by non-

FIGURE 8

"FEMININE SELF-DESCRIPTORS"

ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION



STATISTICAL RESULTS:

$F = 2.236$; $df = 6, 442$; $p = .0388$

Tukey post hoc comparisons:

- ($p = .05$) Married Non-Admins. are significantly higher than Single Non-Admins.
- ($p = .05+$) Married Non-Admins. almost significantly higher than Married Other-Ad.
- ($p = .05+$) Married Non-Admins. almost significantly higher than Married Chiefs.

TABLE 6

"NEUTRAL SELF-DESCRIPTORS"

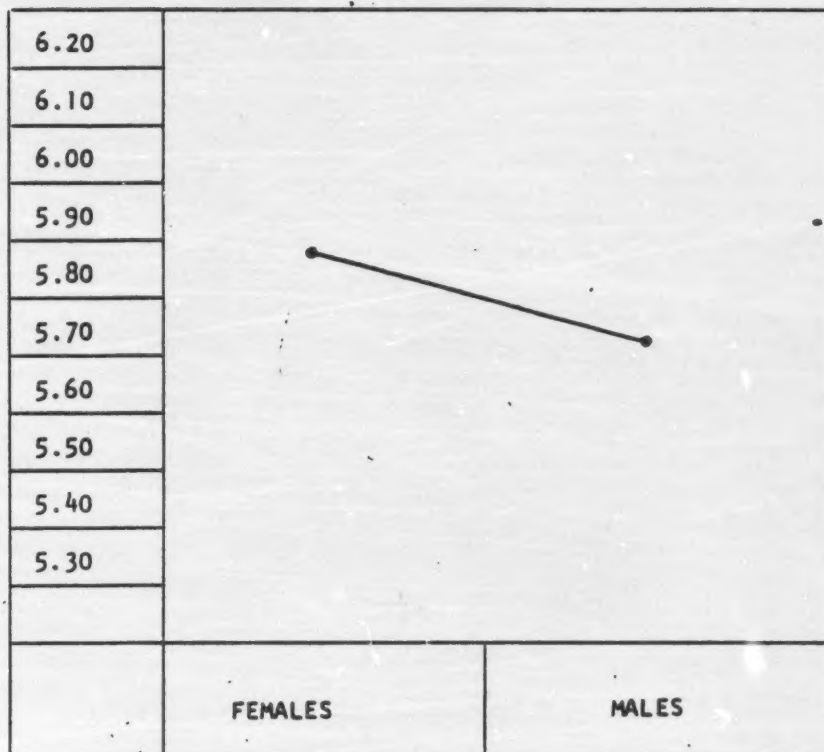
MEAN SCALE SCORES FOR MAIN EFFECTS

MAIN EFFECT FOR SEX		
	<u>FEMALES</u>	<u>MALES</u>
MEAN SCALE SCORE:	5.87	5.71
STATISTICS:	F = 4.037 ; DF = 1,442 ; p = .0451	

FIGURE 9

"NEUTRAL SELF-DESCRIPTORS"

MAIN EFFECT FOR SEX



STATISTICAL RESULTS:

$F = 4.037$; $df = 1, 442$; $p = .0451$

administrators ($\bar{X} = 48.01\%$), deans ($\bar{X} = 47.47\%$), and other-administrators ($\bar{X} = 46.37\%$). With regard to Marital Status, monastics attributed the highest percentage to "Hard Work" ($\bar{X} = 48.82\%$), then marrieds ($\bar{X} = 48.73\%$), and singles ($\bar{X} = 45.24\%$).

(2) Ability - Results indicated that subjects assigned the second greatest weight to "Ability" ($\bar{X}_G = 36.57\%$) of all four success attributions. Again, however, no significant differences or trends were found. It is interesting to note that with regard to Sex, Females in this study attributed more of their success ($\bar{X} = 37.22\%$) to "Ability" than Males in this study ($\bar{X} = 35.92\%$). With regard to Administrative Level, non-administrators attributed the most to "Ability" ($\bar{X} = 39.99\%$), followed by other-administrators ($\bar{X} = 37.58\%$), deans ($\bar{X} = 35.03\%$), and chiefs ($\bar{X} = 33.69\%$). With regard to Marital Status, monastics attributed the highest percentage to "Ability" ($\bar{X} = 37.87\%$), then singles ($\bar{X} = 37.42\%$), and marrieds ($\bar{X} = 34.42\%$).

(3) Luck - Results indicated that subjects assigned the third greatest weight to "Luck" ($\bar{X}_G = 12.2\%$) of all four success attributions. Significant main effects were found for Administrative Level ($F = 2.873$; $df = 3, 474$; $p = .0359$) and Marital Status ($F = 11.08$; $df = 2, 474$; $p = .00002$), although none of the interactions were significant.

The main effect for Administrative Level indicated that deans assigned the most weight to "Luck" ($\bar{X} = 14.55\%$), followed by chiefs ($\bar{X} = 13.61\%$), other-administrators ($\bar{X} = 11.47\%$), and non-administrators ($\bar{X} = 9.181\%$). The scores of deans and chiefs were significantly higher than that of non-administrators ($p = .01$, $p = .05$ respectively). Table 7 and Figure 10 present these results.

The main effect for Marital Status indicated that marrieds assigned the most weight to "Luck" ($\bar{X} = 14.39\%$), followed by singles ($\bar{X} = 13.67\%$), and monastics ($\bar{X} = 8.545\%$). The scores of marrieds and singles were significantly higher than that of monastics ($p = .01$). Table 8 and Figure 11 present these results.

TABLE 7

"SUCCESS ATTRIBUTIONS - LUCK"

MEAN SCALE SCORES (IN PERCENTS) FOR MAIN EFFECTS

MAIN EFFECT FOR ADMINISTRATIVE LEVEL				
	<u>CHIEFS</u>	<u>DEANS</u>	<u>OTHER- ADMINISTRATORS</u>	<u>NON- ADMINISTRATORS</u>
MEAN SCALE SCORE:	13.61	14.55	11.47	9.18
STATISTICS:	F = 2.873 ; DF = 3,474 ; p = .0359			

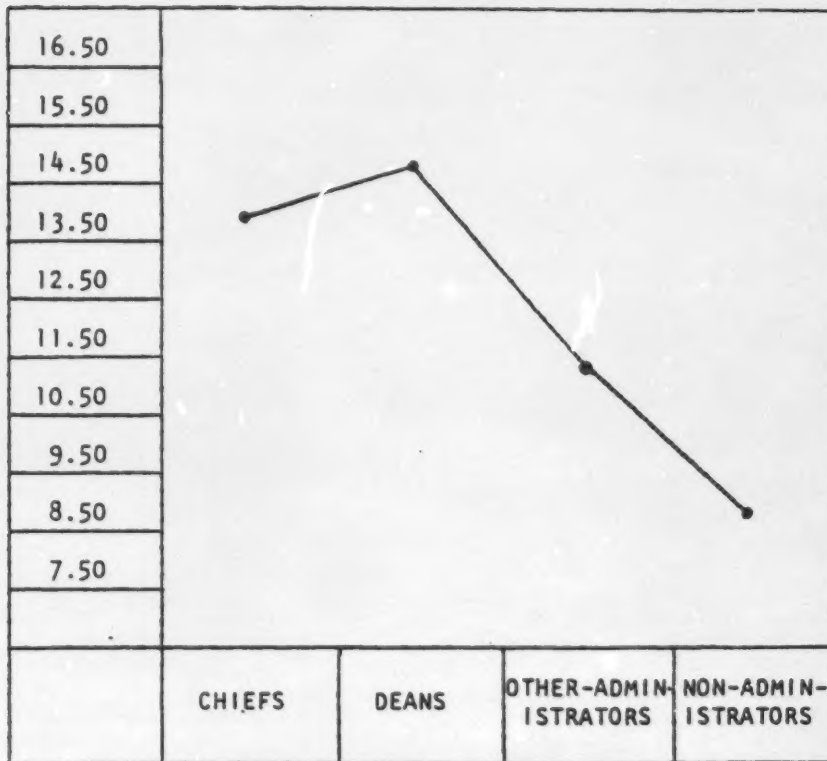
TABLE 8

MAIN EFFECT FOR MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
MEAN SCALE SCORE:	8.545	14.39	13.67
STATISTICS	F = 11.079 ; DF = 2,474 ; p = .00002		

FIGURE 10

"SUCCESS ATTRIBUTIONS - LUCK"

MAIN EFFECT FOR ADMINISTRATIVE LEVEL



STATISTICAL RESULTS:

$F = 2.873$; $df = 3, 474$; $p = .0359$

Tukey post hoc comparisons:

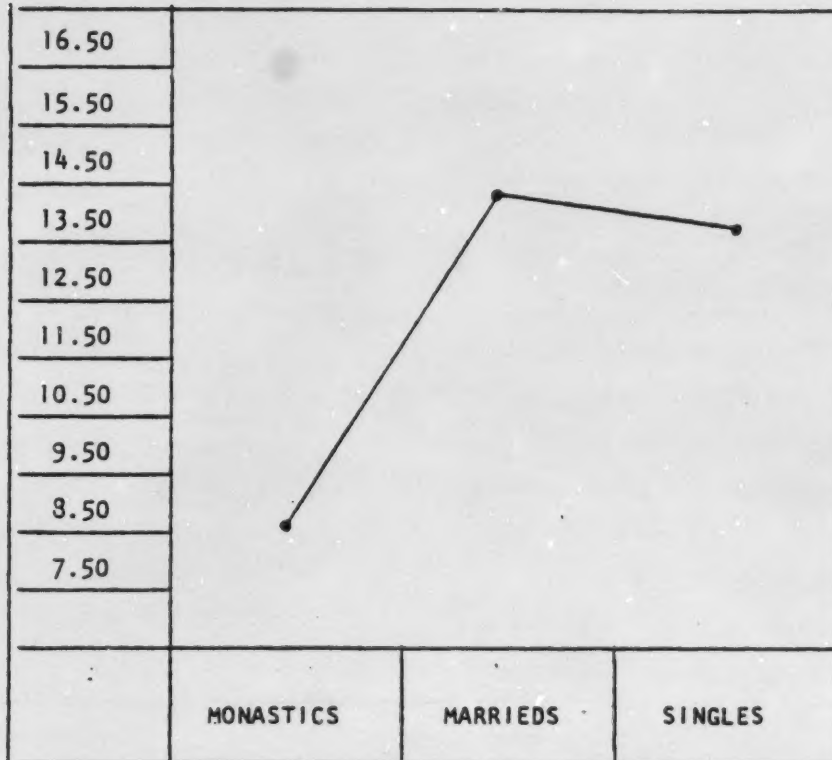
($p=.05$) Chiefs are significantly higher than Non-Admins.

($p=.01$) Deans are significantly higher than Non-Admins.

FIGURE 11

"SUCCESS ATTRIBUTIONS - LUCK"

MAIN EFFECT FOR MARITAL STATUS



STATISTICAL RESULTS:

$F = 11.079$; $df = 2, 474$; $p = .00002$

Tukey post hoc comparisons:

($p=.01$) Marrieds are significantly higher than Monastics.

($p=.01$) Singles are significantly higher than Monastics.

(4) Ease of Task - Results indicated that subjects assigned the least amount of weight to "Ease of Task" ($\bar{X}_G = 3.498\%$) as an explanation for their success in their jobs. Significant main effects were found for Sex ($F = 8.931$; $df = 1, 474$; $p = .0029$) and Marital Status ($F = 6.232$; $df = 2, 474$; $p = .0021$), although none of the interactions were significant.

The main effect for Sex indicated that Males attributed more of their success to "Ease of Task" ($\bar{X} = 4.49\%$) than Females ($\bar{X} = 2.506\%$). Table 9 and Figure 12 present this finding.

The main effect for Marital Status indicated that Monastics attributed the most weight to "Ease of Task" ($\bar{X} = 4.552\%$), then Singles ($\bar{X} = 3.638\%$), and Marrieds the least ($\bar{X} = 2.303\%$). The score for Monastics was significantly higher than that for Marrieds ($p = .01$). Table 10 and Figure 13 present these findings.

(5) Composite Index of Attributions: Internal or External - Attributions for the outcome of an event have been characterized as controlled by "Internal" factors (Hard Work and Ability) or by "External" factors (Luck and Ease of Task) in the research literature (Rosenfield and Stephan, 1978). In order to measure the degree of subjects' "Internality," a Composite Index of Internality was calculated as follows:

The individual attribution measures were combined into a composite index reflecting the relative emphasis placed on internal as opposed to external factors. The composite index of the emphasis on internal factors over external factors was constructed by adding together the two internal attributions (Hard Work and Ability) and subtracting from that the two external attributions (Luck and Ease of Task).

(Rosenfield and Stephan, 1978, p.252)

TABLE 9

"SUCCESS ATTRIBUTIONS - EASE OF TASK"
MEAN SCALE SCORES (IN PERCENTS) FOR MAIN EFFECTS

MAIN EFFECT FOR SEX		
	<u>FEMALES</u>	<u>MALES</u>
MEAN SCALE SCORES:	2.506	4.490
STATISTICS:	F = 8.931 ; DF = 1,474 ; p = .0029	

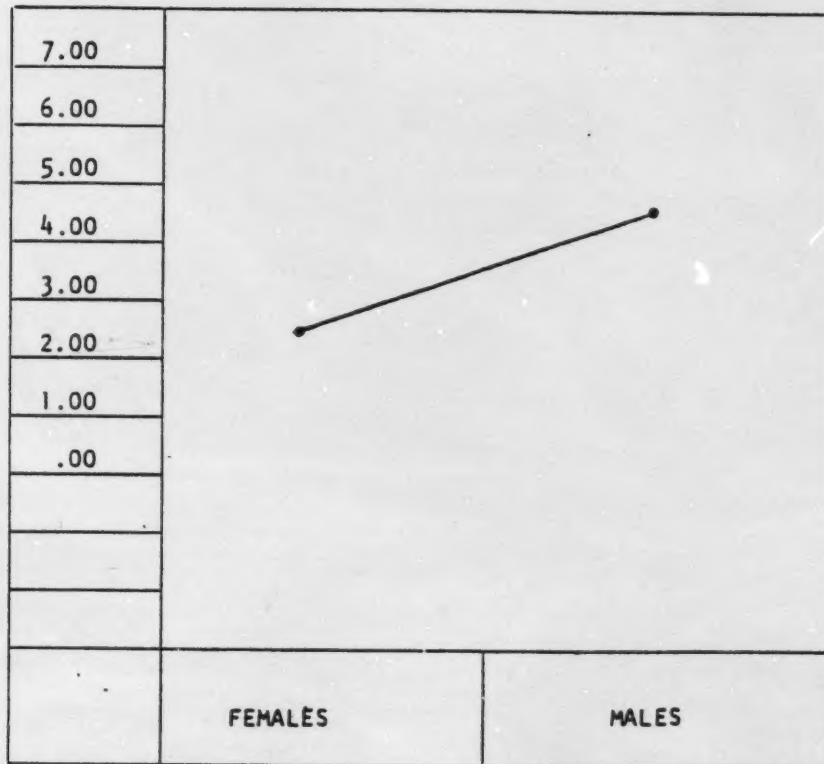
TABLE 10

MAIN EFFECT FOR MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
MEAN SCALE SCORES:	4.552	2.303	3.638
STATISTICS:	F = 6.232 ; DF = 2,474 ; p = .0021		

FIGURE 12

"SUCCESS ATTRIBUTIONS - EASE OF TASK"

MAIN EFFECT FOR SEX



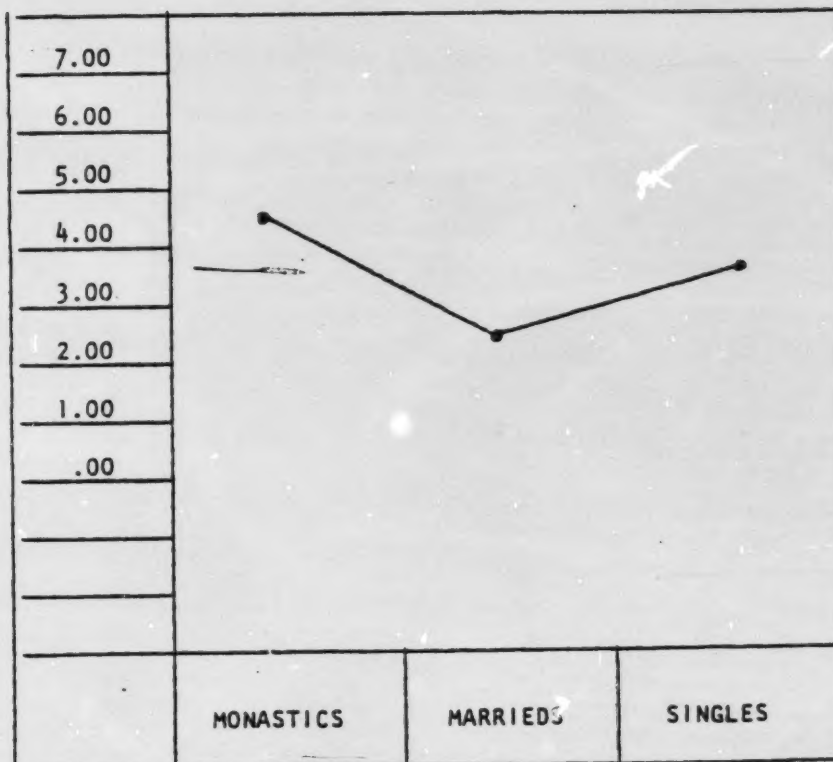
STATISTICAL RESULTS:

$F = 8.931$; $df = 1, 474$; $p = .0029$

FIGURE 13

"SUCCESS ATTRIBUTIONS - EASE OF TASK"

MAIN EFFECT FOR MARITAL STATUS



STATISTICAL RESULTS:

$F = 6.232$; $df = 2, 474$; $p = .0021$

Tukey post hoc comparisons:

($p=.01$) Monastics are significantly higher than Marrieds.

Following this procedure, "Internality" scores were calculated for all main effects and interactions and analysis of variance completed. Results indicated that only the main effect for Marital Status was significant ($F = 3.57$; $df = 2, 474$; $p = .0291$). Monastics were significantly more "Internal" ($\bar{X} = 74$) than Marrieds ($\bar{X} = 66$) and Singles ($\bar{X} = 65$) who were the least "Internal" ($p = .05$ for both). Results for the main effects are presented in Table 11 and Figure 14.

The Composite Index of "Internality" scores for the interactions between Sex and Marital Status, Sex and Administrative Level, and Administrative Level and Marital Status were not significant, nor was the three-way interaction between Sex, Administrative Level and Marital Status.

The Composite Index of "Internality" scores revealed significant results only for the main effect of Marital Status. In addition, the patterns of the "Internal" attributions were the mirror images of the "External" attributions.

Summary:

A summary of all significant and non-significant main effects and interactions for each of the dependent variables and scales employed in this study is presented in Table 12.

Discussion

Self-Descriptors:

The three groups of Self-Descriptive adjectives attempted to measure the perceived sex-appropriateness of subjects in their jobs. Results of the present study with regard to "Masculine," "Feminine," and "Neutral" self-descriptors parallel those of previous investigations on "Androgyny" (Lester and Chu, 1981). That Females consistently scored higher than Males in describing themselves as more "Masculine," more "Feminine," and more "Neutral," suggests that these Females may have shaped themselves after a "masculine model" in order to succeed in their jobs. A significant main effect for Marital Status indicated that Married subjects were highest

TABLE 11

"COMPOSITE INDEX OF ATTRIBUTIONS: INTERNALITY SCORES"
SEX, ADMINISTRATIVE LEVEL, MARITAL STATUS

INTERNALITY SCORES FOR SEX		
	<u>FEMALES</u>	<u>MALES</u>
MEAN SCALE SCORE:	71	66
STATISTICS:	F = 2.06; DF = 1, 474; p = .1518	

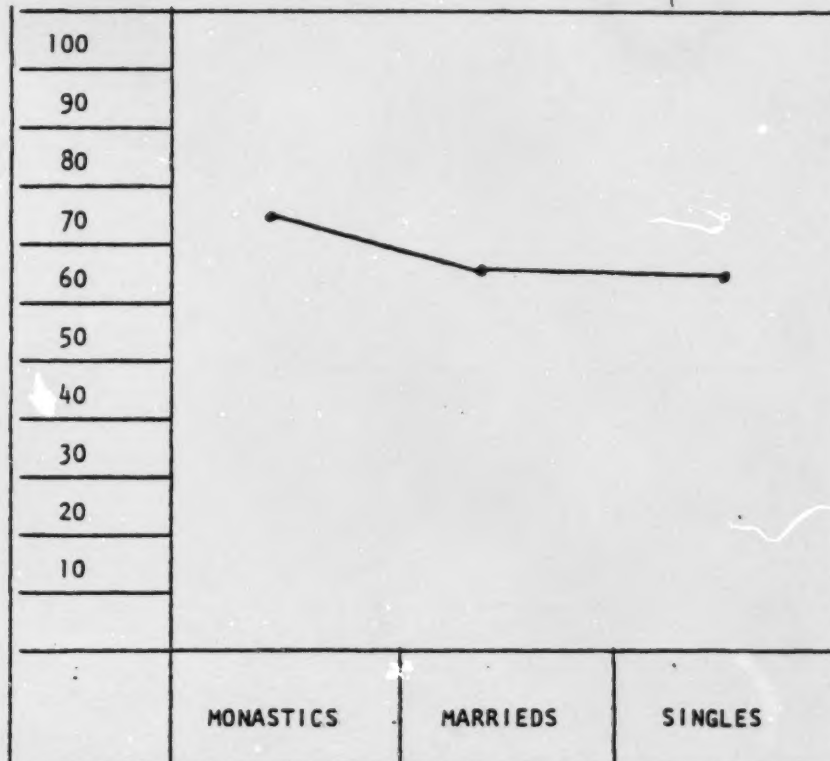
INTERNALITY SCORES FOR ADMINISTRATIVE LEVEL				
	<u>CHIEFS</u>	<u>DEANS</u>	<u>OTHER- ADMINISTRATORS</u>	<u>NON- ADMINISTRATORS</u>
MEAN SCALE SCORE:	64.6	65	68	76
STATISTICS:	F = 2.10; DF = 3, 474; p = .10			

INTERNALITY SCORES FOR MARITAL STATUS			
	<u>MONASTICS</u>	<u>MARRIEDS</u>	<u>SINGLES</u>
MEAN SCALE SCORE:	74	66	65
STATISTICS:	F = 3.57; DF = 2, 474; p = .0291		

FIGURE 14

"COMPOSITE INDEX OF ATTRIBUTIONS: INTERNALITY SCORES"

MAIN EFFECT FOR MARITAL STATUS



STATISTICAL RESULTS:

$F = 3.57$; $df = 2, 474$; $p = .0291$

Tukey post hoc comparisons:

($p=.05$) Monastics are significantly higher than Marrieds.

($p=.05$) Monastics are significantly higher than Singles.

TABLE 12

SUMMARY OF SIGNIFICANT "F" STATISTICS FOR ALL DEPENDENT VARIABLES

DEPENDENT VARIABLES	SEX	ADMINISTRATIVE LEVEL	MARITAL STATUS	SEX BY ADMINISTRATIVE LEVEL INTERACTION	SEX BY MARITAL STATUS INTERACTION	ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION	SEX BY ADMINISTRATIVE LEVEL BY MARITAL STATUS INTERACTION
SELF-DESCRIPTORS:							
MASCULINE	6.37*	6.59***	5.83**	ns	3.16*	2.63*	ns
FEMININE	4.57*	ns	ns	ns	ns	2.24*	ns
NEUTRAL	4.04*	ns	ns	ns	ns	ns	ns
SUCCESS ATTRIBUTIONS:							
HARD WORK	ns	ns	ns	ns	ns	ns	ns
ABILITY	ns	ns	ns	ns	ns	ns	ns
LUCK	ns	2.87*	11.08***	ns	ns	ns	ns
EASE OF TASK	8.93**	ns	6.23**	ns	ns	ns	ns
INTERNALITY INDEX	ns	ns	3.57*	ns	ns	ns	ns

KEY:

ns = not significant
 * $p < .05$
 ** $p < .01$
 *** $p < .001$

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and Monastics and Singles lowest. With regard to Administrative Level, Chiefs were highest on "Masculine" self-descriptors, followed in order by Deans, Other-Administrators, and lowest for Non-Administrators. This finding supports the notion that a higher educational administrative status, like high status virtually anywhere else in our culture, tends to be associated with those characteristics perceived as more "Masculine."

Subjects were more likely to perceive themselves as characteristically "Feminine" in leadership behaviors if they were Female, Married, and Non-Administrators. Subjects were more likely to perceive themselves as characteristically "Neutral" with regard to sex-appropriate leadership behaviors if they were Females. Given the stereotypes that exist with regard to women leaders and women administrators, these findings suggest that, in the real world, women and men do not necessarily fulfill the sex-typed role-expectations that others have of them.

(1) Masculine Self-Descriptors - Subjects were more likely to perceive themselves as characteristically "Masculine" in leadership behaviors if they were Females, Chiefs and Married. The overall mean score for all subjects who responded ($N = 466$) was $\bar{X}_G = 3.815$, just about in the middle of a seven-point scale. It is interesting to note that this mean score for the "Masculine" self-descriptors was the lowest of the three groups of adjectives. The mean score for "Feminine" self-descriptors was $\bar{X}_G = 5.55$ and the mean score for "Neutral" self-descriptors was $\bar{X}_G = 5.788$. It is possible that subjects were responding to the social undesirability of characterizing themselves as "Authoritative," "Dominant," "Unemotional," "Influential," and "Powerful," all of which comprised the "Masculine" self-descriptor scale. Although there was high agreement that such adjectives were associated with "Masculine" styles of leadership (agreement rate was 82% minimum), subjects including Males appeared less willing to describe themselves in these terms than in "Feminine" or "Neutral" terms.

Female subjects outscored Males in reporting that they saw themselves behaving with more "Masculine" behaviors in their jobs. Research has indicated that women who go into higher education administration and other male-dominated professions have been found to be more independent and competent than other women (Ashburn, 1977). It is nonetheless somewhat surprising that of subjects in the present study Females reported more "Masculine" characteristics than Males. Perhaps these Females have had to shape themselves after a masculine model, masculine stereotype or set of expectations in order to succeed in their jobs as administrative leaders. Such an accommodation to a masculine model may not have been as critical for Males in the present study. By virtue of their gender these Males have been accepted and perceived as behaving appropriately in their administrative positions. Therefore, Males may have had less of a need than Females to describe themselves as "Masculine" since it is likely that, unlike Females, they have seldom been perceived to be other than "Masculine" and operating in a sex-appropriate style.

Of the four Administrative Levels, Chiefs described themselves as most "Masculine," followed closely by Deans, both of whom were significantly higher on "Masculine" Self-Descriptors than Other-Administrators and Non-Administrators. This finding supports the notion that the higher subjects' administrative status, the more likely they will describe themselves as more "Masculine."

Of the three Marital Statuses, Married subjects described themselves as significantly more "Masculine" than Monastic and Single subjects. Why this should be the case is not clear. Perhaps Married subjects, especially Females, feel freer to describe themselves as "Masculine" since they have already "proven" their sex-appropriate normalcy by virtue of having married. It is possible that Single and Monastic subjects feel somewhat less assured on this subject.

The matter of sex-appropriateness arises when the Sex by Marital Status interaction is examined. Married Females reported the highest "Masculine" self-descriptor scores

followed by Single Females and then Married Males. Once again, Single Males reported the lowest score. This significant interaction is consistent with respect to the main effects for Sex and for Marital Status. Except for a slight difference which was not significant, Male Monastics reported virtually the same score as Female Monastics. However, Male Singles' score was significantly lower than Female Singles' and other Males.

Finally, a significant interaction was observed between Administrative Level and Marital Status. Again, Married subjects were highest on "Masculine" self-descriptors across all administrative levels except non-administrators where a slightly different pattern was found. In fact, married deans scored highest of all groups on "Masculine" self-descriptors and single non-administrators scored the lowest. Within the Single marital status, chiefs and deans scored quite high, but single other-administrators were lower, with single non-administrators the lowest of all groups. Within this group of single non-administrators, both Females and Males scored low on "Masculine" self-descriptors. However, the lowest score of $\bar{X} = 2.467$ was reported by Males. This pattern is similar to that previously noted for Male Singles. Another pattern was noted within the Monastic group where chiefs and non-administrators were highest, but deans and other-administrators were lowest. Why this should be the case is not clear.

It appears that this scale of "Masculine" self-descriptors more completely than the other two self-descriptor scales resulted in significant differences among groups of subjects. At the same time, it revealed a lower mean score which reflected a possible degree of social undesirability in responses for the adjectives designated as "Masculine."

(2) Feminine Self-Descriptors - Subjects were more likely to perceive themselves as characteristically "Feminine" in leadership behaviors if they were Female. The overall mean score for all subjects responding ($N = 466$) was $\bar{X}_G = 5.55$, which was at the upper end of a seven-point scale. This mean score for "Feminine" self-descriptors was in the middle of the

three groups of adjectives. Although there was high agreement that these adjectives were associated with "Feminine" styles of leadership, it is possible that subjects were responding to the social desirability of the items that comprised the "Feminine" self-descriptor scale: "Sensitive," "Open," "Compassionate," "Concerned," and "Sincere."

Female subjects significantly outscored Males in reporting that they saw themselves behaving with more "Feminine" behaviors in their jobs. This finding is of interest when compared to that for "Masculine" self-descriptors in which Females also significantly outscored Males. It would appear that Female subjects in the present study perceived themselves both as more "Masculine" and more "Feminine" than their Male counterparts. Apparently these responses for Females is suggestive of "Androgyny" (Lester and Chu, 1981), a concept which denotes the integration of masculine and feminine traits in one person (Bem, 1974; 1979).

The administrative level by marital status interaction also revealed significant differences for "Feminine" self-descriptors. Married non-administrators had the highest score which differed significantly from single non-administrators, married other-administrators and married chiefs. Single other-administrators had the lowest score, followed closely by single non-administrators. The pattern for "Feminine" self-descriptors parallels that of "Masculine" self-descriptors, at least in the extremes. Exactly why married non-administrators reported perceiving themselves as so extremely "Feminine" relative to other administrative groups of subjects is unclear. It may be due to an absence of an administrative career and strivings that allowed non-administrators to more fully reveal their "Feminine" natures - or perhaps it is the reverse. Those non-administrative faculty with a greater degree of "Feminine" qualities may not have perceived themselves, or been perceived by others, as capable of leadership roles.

(3) Neutral Self-Descriptors - Subjects were more likely to perceive themselves as characteristically "Neutral" with regard to sex-appropriate leadership behaviors if they were Females. The overall mean score for all subjects responding ($N = 466$) was $\bar{X}_G = 5.788$, toward the upper end of a seven-point scale. This mean score for "Neutral" self-descriptors was highest of the three groups of adjectives. Once again, although there was high agreement that four adjectives were associated with "Neutral" styles of leadership, it is possible that subjects were responding to the social desirability of the items that comprised the scale: "Intelligent," "Pleasant," "Friendly," and "Just."

Consistently, Females significantly outscored Males in reporting that they saw themselves behaving with more "Neutral" behaviors in their jobs. This finding is again noteworthy when compared with those for "Masculine" and "Feminine" self-descriptors, in which Females outscored Males. These findings suggest that Females in the present study perceive themselves as "Androgynous" with respect to sex-appropriateness of self-descriptors of leadership behaviors.

Attributions for Success:

Contrary to expectations, although Females and Males differed in their success attributions for "Ease of Task," no other Sex difference was found. Both administrative level and marital status made a difference in "Luck" attributions, although not for "Ability" or "Hard Work" attributions. Results on the "Composite Index of Internal vs. External Attributions" revealed that monastics attributed their success significantly more often to "Internal" factors than did married or single subjects. However, no differences were found for sex or administrative level or for any interactions. Such a pattern of results would not have been predicted from the literature on "Attribution Theory" (Feather and Simon, 1973; Nicholls, 1975; Levine, Reis, Turner, and Turner, 1976). Significant differences were found, however, for Luck and Ease of Task, the two attributions characterized as "External" (Rosenfield and Stephan, 1978).

(1) Luck - A significant main effect for administrative level was found with deans highest, then chiefs, other-administrators and non-administrators with the lowest score for "Luck" attributions. It may be that deans and chiefs believed in "Luck" the most of all administrators because they were most likely to have benefitted from it in their upwardly mobile careers. Deans and chiefs were probably more likely to have had access to a "network" of colleagues and mentors who may have helped these subjects by introducing them to influential people and by letting them know when the timing for job changes was right. On the other hand, non-administrators at the bottom of the administrative ladder attributed the least to "Luck" as an explanation for their success. Perhaps such Faculty perceived "Luck" to have had little to do with their careers, which were based on research and teaching skills and competence. This non-administrative group in particular of all administrative levels may have believed most that "Ability" was responsible for their success, but not "Luck" or "Ease of Task." They could therefore be characterized as the most "Internal" and least "External" of all administrative groups in their success attributions.

Marital status proved to be significant for "Luck" attributions, with marrieds highest, then singles, and least of all monastics. Married subjects might be more likely to believe "Luck" was a factor in their success because their social network might be more extensive, giving marrieds and their partners an advantage in knowing more people who might be influential and helpful in furthering the careers of married subjects. Such opportunities might be less available to singles and to monastics. It is interesting to note that Sex was not a significant factor in "Luck" attributions.

(2) Ease of Task - Significant differences were found on attributions of success to "Ease of Task" for sex and for marital status. Males more than females believed "Ease of Task" was a reason for their success in their jobs. These results are consistent with the other "External" attribution of "Luck." Perhaps females thought their jobs were more challenging and

difficult than Males. If so, Females might be less likely than Males to think that anything inherent in the "Ease of the Job" itself might be responsible for any success.

The main effect for marital status was significant with monastics attributing significantly more to "Ease of Task" than marrieds who were least, with singles again in the middle. Perhaps monastics attributed more of their success to "Ease of Task" than the other marital statuses because it was a reflection of their greater humility and modesty. Such personal characteristics would be more involved with monastics' religious commitments and beliefs.

Results of the present study indicate that where sex differences were expected, they did not occur (attributions for success to Hard Work and to Ability), and where unexpected, they did occur (attributions for success to Luck and to Ease of Task). Given the stereotypes that exist with regard to women leaders and women administrators, these findings suggest that, in the real world, women and men do not necessarily fulfill the sex-typed role expectations that others have of them. Differences in attributions for "Luck" and "Ease of Task" may reflect aspects of the socialization process that might have affected women and men differently. Women have been socialized to feel totally responsible for the work they produce and to believe that their work is due to their own efforts. They would therefore be less likely to believe that their success is due to "Ease of Task," since they have had to work so long and so hard just to get the administrative position in the first place. On the other hand, Male administrators could be more likely to believe that "Ease of Task" was involved in their success since their professional network is greater than Females' and since "knowing the right people" has likely operated for Males much more frequently than it has for Females. This would cause them to believe that perhaps an element of being in the right place, at the right time, and knowing the right person was responsible, at least in part, to their success. Because of internal and external barriers to success, it is likely that women have not yet been able to perceive "Ease of Task" as an explanation for

their own progress in their careers.

(3) Composite Index of Internal vs. External Attributions - The results on the "Composite Index of Internal vs. External Attributions" were not as expected, nor as the literature would indicate. Unlike previous findings in which Males attributed their successes more to "Internal" factors than did Females when the task was more masculine (Feather and Simon, 1973; Nicholls, 1975; Levine, Reis, Turner and Turner, 1976; McHugh, Fisher and Frieze, 1975; and Stephan, Rosenfield and Stephan, 1976), Females in the present study ($\bar{X} = 71$) did not differ from Males ($\bar{X} = 66$) in the extent to which they attributed success more to "Internal" factors.

Since the chief administrative level has been viewed traditionally as a masculine task, the sex by administrative level interaction should provide results comparable to previous research cited. Results of the present study indicate that Male administrators did not attribute their success more internally than comparable Females, but rather did not differ significantly from Females.

The non-administrative or faculty level could be viewed as the most "Feminine" task since teaching, rather than administration, has been more traditional for Females than for Males, even in higher education. With feminine tasks, previous researchers have found that Females attributed success more internally than did Males (Rosenfield and Stephan, 1978). Results of the present study for the non-administrative or faculty group do not support these findings. Females in the present study were not significantly different than Males on "Internal" attributions for success for the "Feminine" task.

The significant main effect for marital status indicated that monastic subjects were significantly more "Internal" ($\bar{X} = 74$) than married ($\bar{X} = 66$) and single ($\bar{X} = 65$) subjects. This finding is somewhat unexpected, since marital status differences were not found on either "Hard Work" or "Ability" attributions, both "Internal" factors. While marital status differences were found for both "Luck" and "Ease of Task" attributions, both "External" factors, monastics were lowest

on "Luck" yet highest on "Ease of Task" attributions. It is possible that monastics' high score on "Ease of Task" was sufficient to raise their Composite Index of Internality score to a significantly higher level than the other two marital statuses. Perhaps, as was the case with "Ease of Task" attribution, monastics might be more humble and modest than marrieds and singles. Such personal characteristics would be more involved with monastics' religious commitments and beliefs. No other significant results were found for the Composite Index of Internality scores.

The pattern of results, obtained on both the "so-called" masculine task (chief level) and feminine task (non-administrative level) demonstrates that Females in the present study attributed their success as internally as Males. Such a pattern would not have been predicted from the literature on "Attribution Theory." It suggests that this group of Females, regardless of their administrative level, has incorporated into a belief system what can only be described as traditionally masculine explanations for their successes. The fact that these scores for Females in higher education administration were consistently as "Internal" as Males, forces a reconsideration of the attribution model. It is not clear whether these results are due to personality factors that led to such "Internal" attributions for success which enabled these Females to succeed in a non-traditional domain, also known as a "self-selection" process. It could also be that these Females forced themselves to believe that success, when it came, could only have been due to their own effort (Hard Work) and skill (Ability), because the obstacles to success had been so great.

What is clear is that highly educated, high-achieving Females are as likely as comparable groups of Males to believe they are personally responsible for their own success. Interestingly enough, it appears to be the Males, across every administrative level and every marital status, who were more likely to attribute more of their success to "External" factors (Luck and Ease of Task), over which they had far less control.

Reference Notes

1. Winer, B. J. Statistical principles in experimental design, 2nd Edition. New York: McGraw-Hill, 1971.
Winer discusses this handling of unequal cell frequencies in the design of factorial experiments (pp.402-405).

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